

FIG. 1A

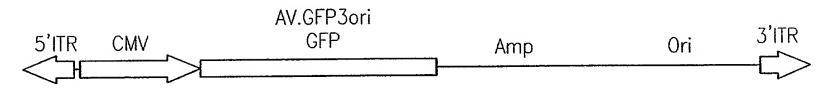


FIG. 1B

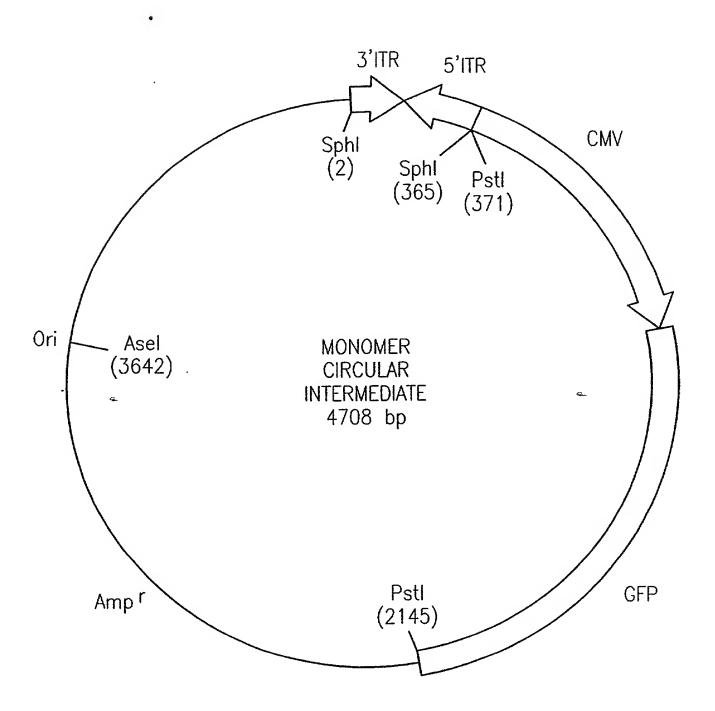


FIG. 1C

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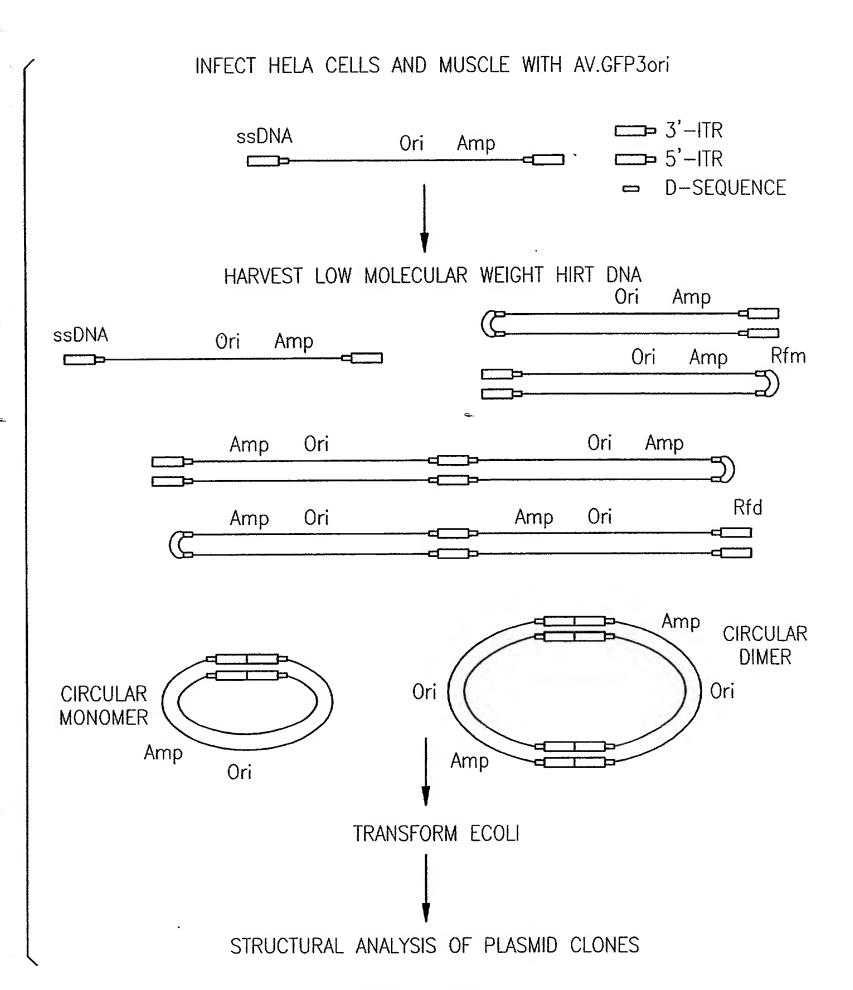


FIG. 1D

TITLE: ADENO-ASSOCIATED VIRUS VECTORS INVENTORS NAME: John F. Engelhardt et al.

SERIAL NO.: 09/276,625

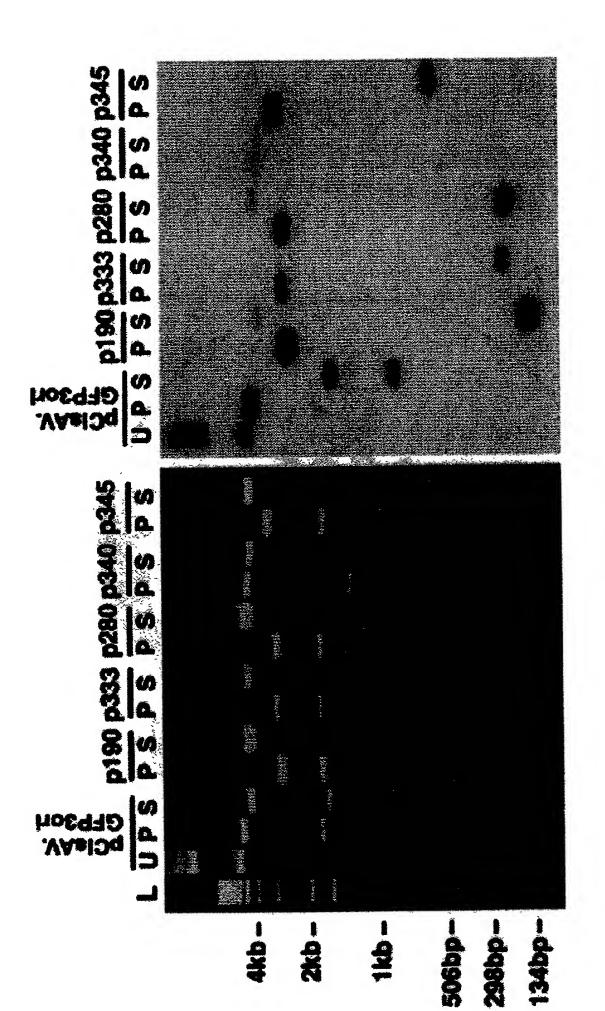


FIG. 2A

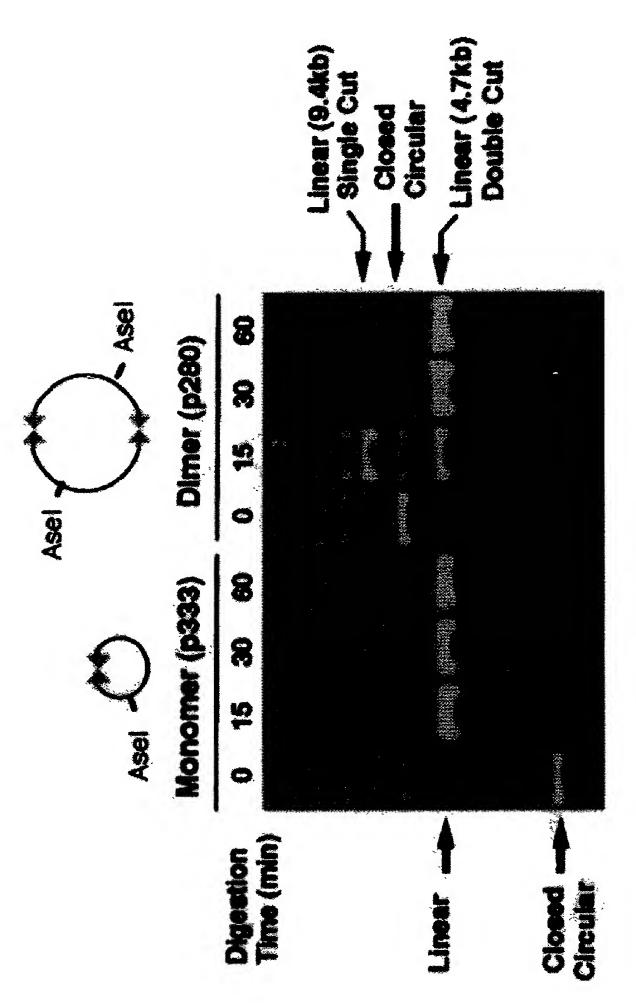
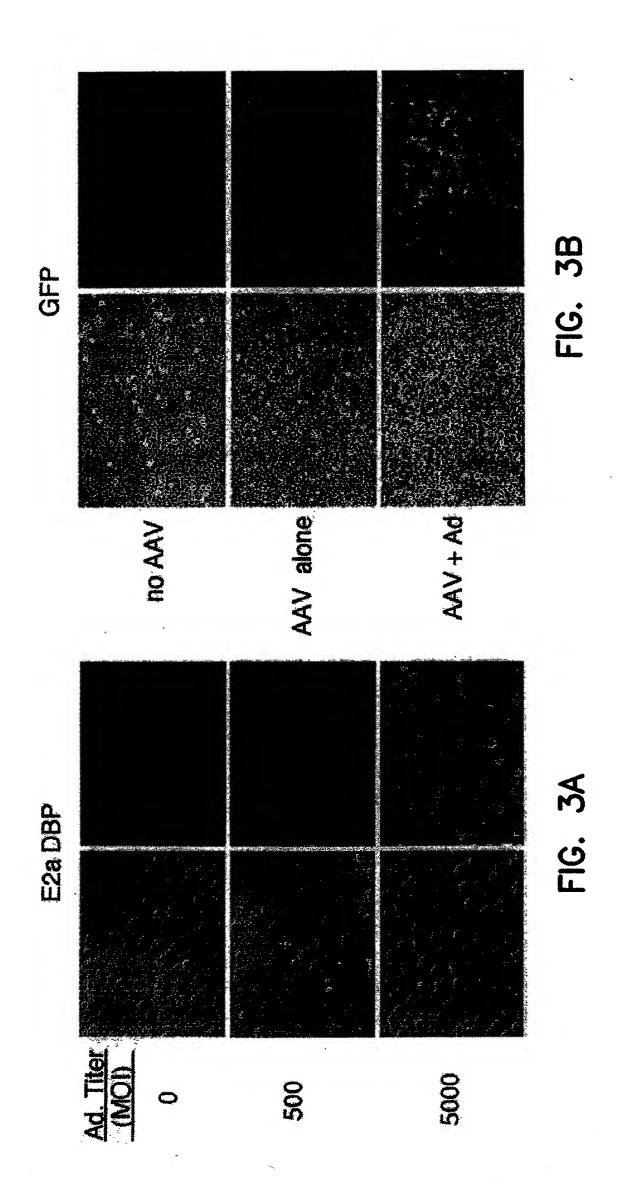
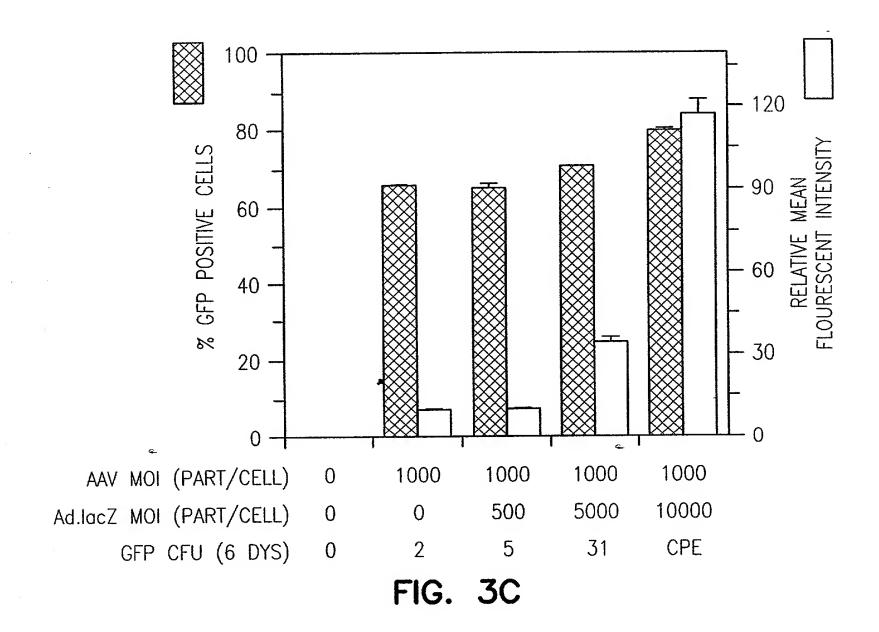


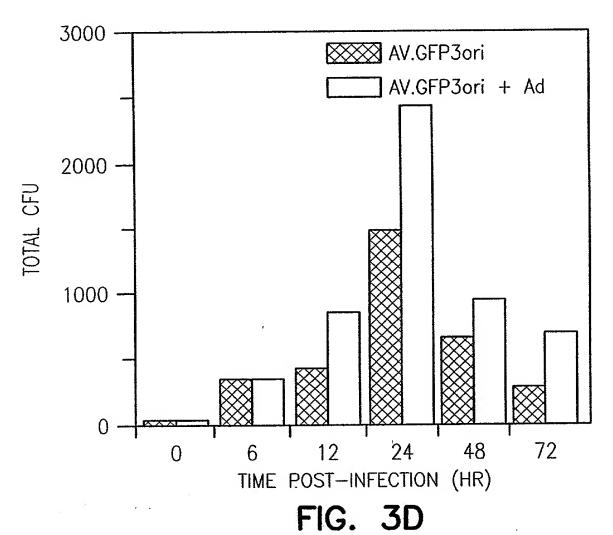
FIG. 2B

Ti E: ADENO-ASSOCIATED VIRUS VL .ORS INVENTORS NAME: John F. Engelhardt et al. SERIAL NO.: 09/276,625

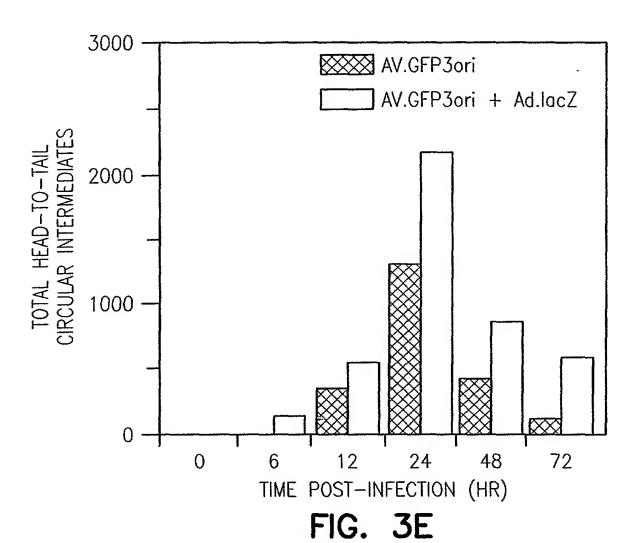
110 TAATC TAATC TAATC TAATC TAATC	Smal 2220 320003 330	OCONO CONO CCONO C	440 CAAAA CAAAA CAAAA CAAAA CAAAA	
CGGGTTAATC CGGGTTAATC CGGGTTAATC CGGGTTAATC CGGGTTAATC CGGGTTAATC	Smal OCTTTGCCGG OCTTTGCCGG	CCTCAGCGAG CCTCAGCGAG CCTCAGCGAG CCTCAGCGAG	44 GTGAGCAAA GTGAGCAAA GTGAGCAAA GTGAGCAAA GTGAGCAAA	
100 AGTAGCATGG AGTAGCATGG AGTAGCATGG AGTAGCATGG AGTAGCATGG AGTAGCATGG AGTAGCATGG	Sma I 210 CGACGCCCC CGACGCCC	0011000000 00110000 00110000 00110000 00110000	TECATGCAT GITTGCATGCAT GI	O
PCGGTAGATA TCGGTAGATA TCGGTAGATA TCGGTAGATA TCGGTAGATA TCGGTAGATA	AAAGGTCGCC	00CGACCTTT 00TCGCCCGG	42 (FATCTACAGC FATCTACAGC FATCTACAGC FATCTACAGC FATCTACAGC FATCTACAGC FATCTACAGC	FIG. 2
80 CTCGAATTCA CTCGAATTCA CTCGAATTCA CTCGAATTCA CTCGAATTCA			410 CCATGCTACT CCATGCTACT CCATGCTACT CCATGCTACT CCATGCTACT CCATGCTACT	
Sphi 70 GCATGCMG GCCATGCMG GCCATGCMG GCCATGCMG GCCATGCMG GCCATGCMG	CTCGCTGAGG CTCGCTGAGG CTCGCTGAGG CTCGCTGAGG	IGAGCCGCC CGGGCAAAGC CCGGGCGTCG		00 00 00 00 10 10 10 10 10 10 10 10 10 1
AACGACTGCA AACGACTGCA AACGACTGCA AACGACTGCA AACGACTGCA AACGACTGCA AACGACTGCA	CGCTCGCTCG C CGCTCGCTCG C CGCTCGCTCG C CGCTCGCT		CTCCATCACT AGGGTTCCT TGTAGTTAAT CTCCATCACT AGGGTTCCT GGAGTTAAT CTCCATCACT AGGGTTCCT TGTAGTTAAT CTCCATCACT AGGGTTCCT TGTAGTTAAT CTCCATCACT AGGGTTCCT TGTAGTTAAT CTCCATCACT AGGGTTCCT TGTAGTTAAT CTCCATCACT AGGGTTCCT GGAGTTAAT CTCCATCACT AGGGGTTCCT GGCAGTTAAT CTCCATCACT AGGGGTTCCT GGCAGTTAAT	CCATAGGCTC CGCCC
SO TAAGTTATGT TAAGTTATGT TAAGTTATGT TAAGTTATGT TAAGTTATGT	cerements of cerem	GCTCGCTCAC	AGGGGTTCCT AGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGGTTCCT AGGGTTCCT AG	TOGCGTTTTT
40 CCATTTACCG CCATTTACCG CCATTTACCG CCATTTACCG CCATTTACCG	AGTGATGGAG TTGGCCACTC AGTGATGGAG TGGCCACTC AGTGATGGAG TTGGCCACTC AGTGATGGAG TTGGCCACTC AGTGATGGAG TTGGCCACTC AGTGATGGAG TTGGCCACTC AGTGATGGAG TTGGCCACTC AGTGATGGAG TTGGCCACTC	Cracacacac		480 GCCGCGTTG- GCCGCGTTG- GCCGCGTTG- GCCGCGTTG- GCCGCGTTG- GCCGCGTTG-
30 CCAAGGGGG GCCAGGGGG GCCAGGGG		GAGCGCGCAG	GAGTGGCCAA	CCGTAAAAG CCGTAAAAAG CCGTAAAAAG CCGTAAAAAG CCGTAAAAAG CCGTAAAAAG
TOGGCOGICA	AGGAACCCT AGGACCCT AGGACCCT AGGACCCT AGGACCCT AGGACCCT AGGACCCT AGGACCCT AGGACCCT AGGACCCT AGGAGCCCT	GTGAGCGAGC	CGCAGAGAGG CGCAGAGAGGG CGCAGAGAGAGG CGCAGAGAGAG	460 AGGCCAGGAA AGGCCAGGAA AGGCCAGGAA AGGCCAGGAA AGGCCAGGAA AGGCCAGGAA AGGCCAGGAA AGGCCAGGAA AGGCCAGGAA
10	ATTAACTACA I ATTAACTACA I ATTAACTACA I ATTAACTACA I ATTAACTACA I ATTAACTACA I ATTAACTACA I	A2T225555	340 CGAGCGAGCG CGAGCGAGCG CGAGCGAGCG CGAGCGAG	450 GGCCAGCAAA GGCCAGCAAA GGCCAGCAAA GGCCAGCAAA GGCCAGCAAA GGCCAGCAAA
H 0' 0' 0' 0' 0' 0' 0' 0' 0' 0' 0' 0' 0'		 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		• • • • • • • • • • • • • • • • • • •
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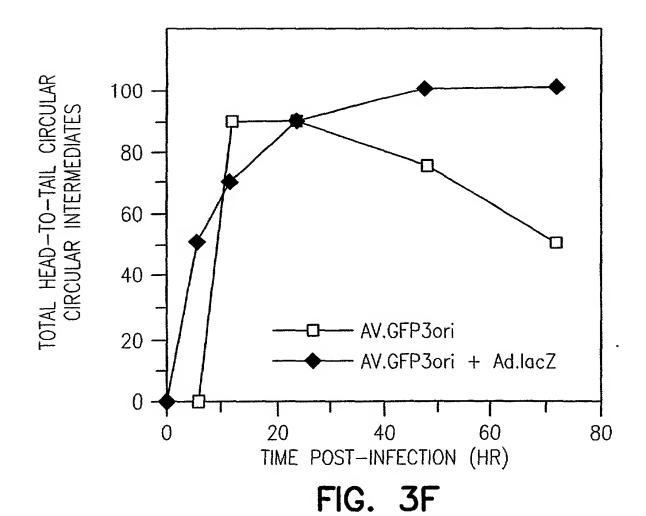






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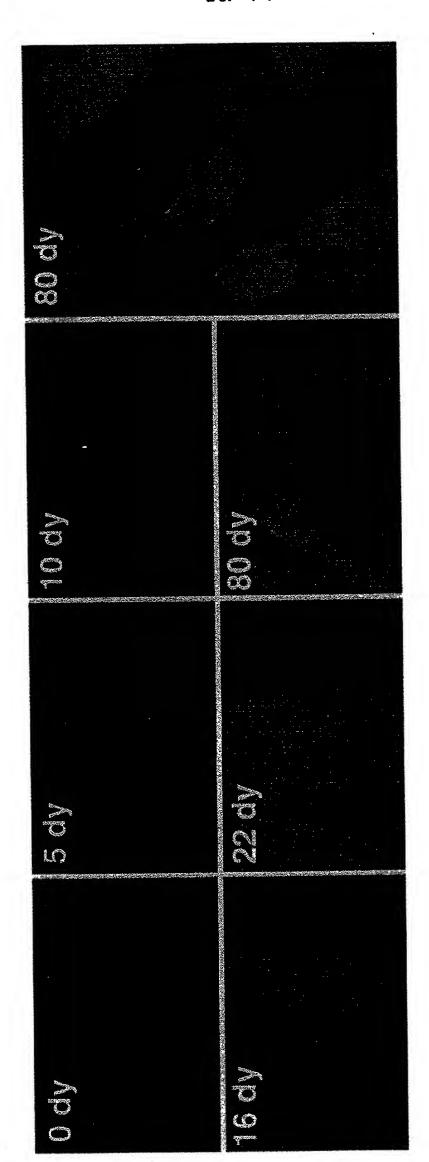


FIG. 4A

TITLE: ADENU-NO INVENTORS NAME: John SERIAL NO.: ADENO-ASSOCIATED VIRUS VECTORS John F. Engelhardt et al. 09/276,625

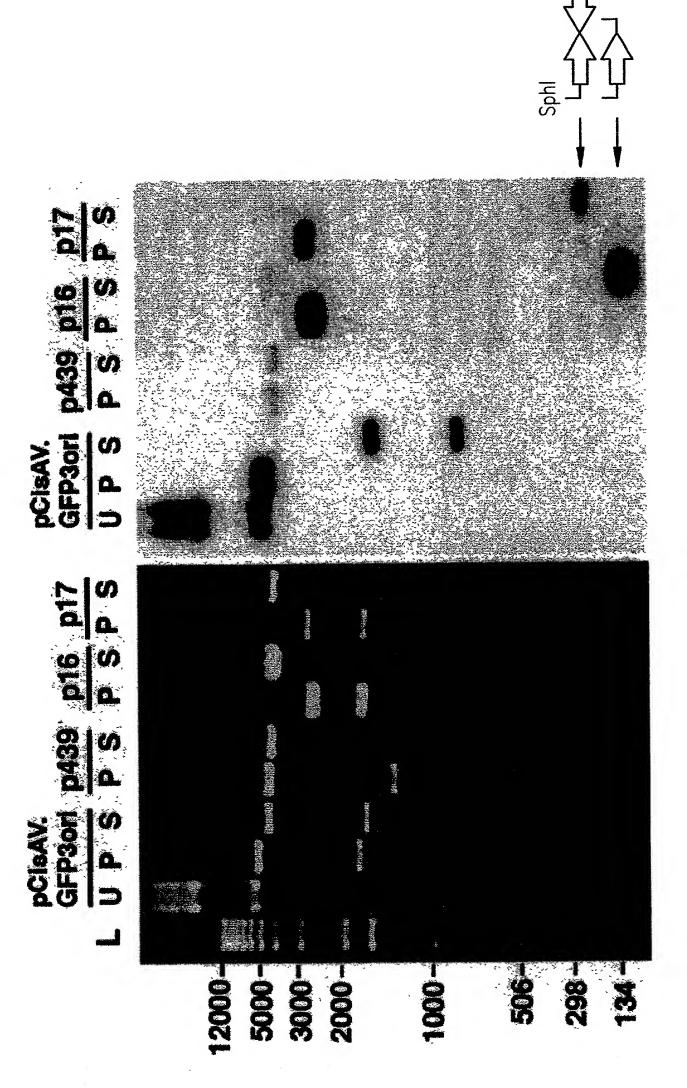
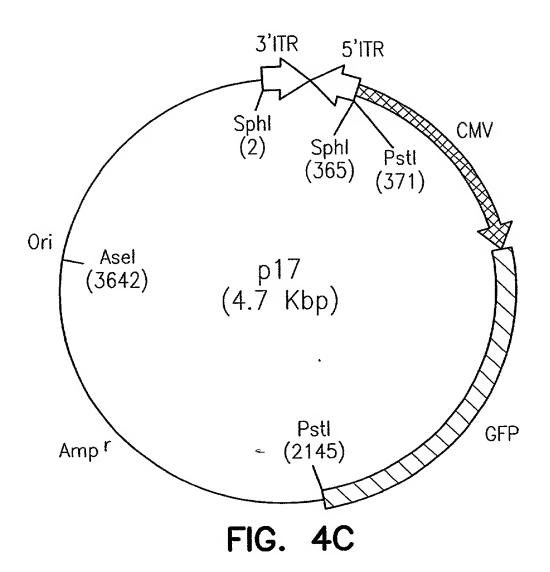
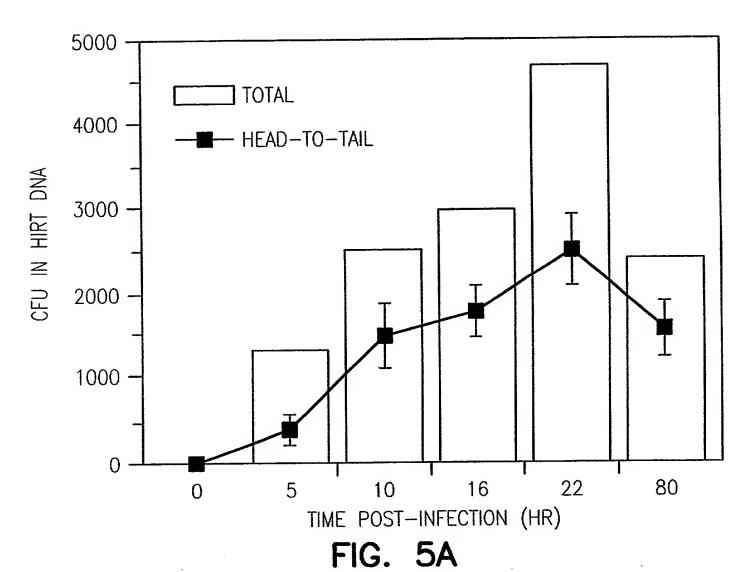


FIG. 4B

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TITLE: ADENO-ASSOCIATED VIRUS VECTORS INVENTORS NAME: John F. Engelhardt et al.

SERIAL NO.: 09/276,625

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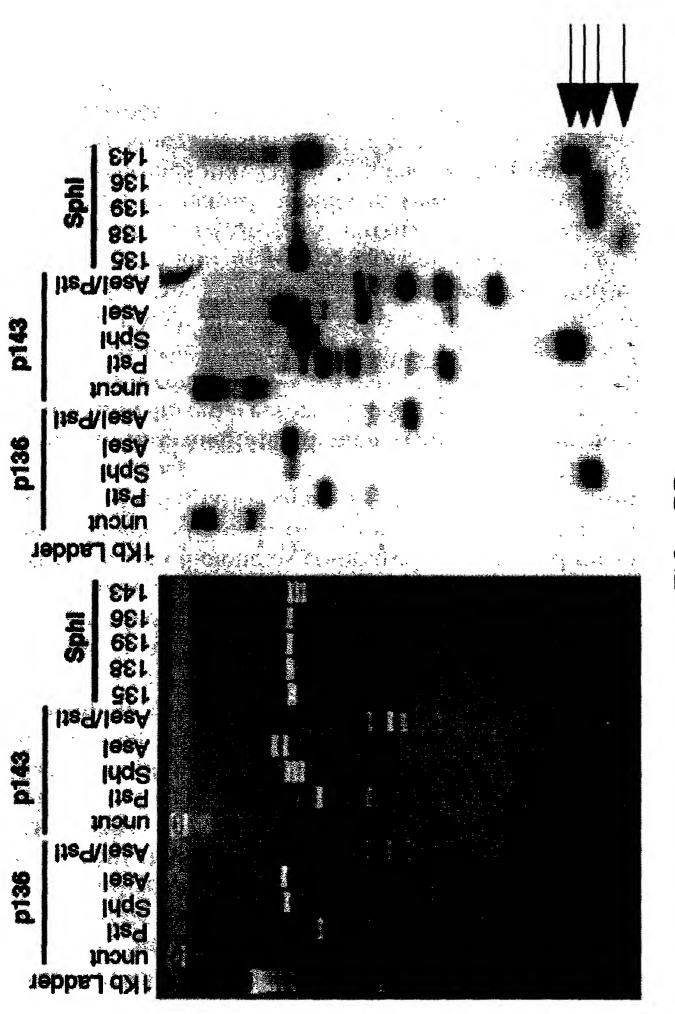
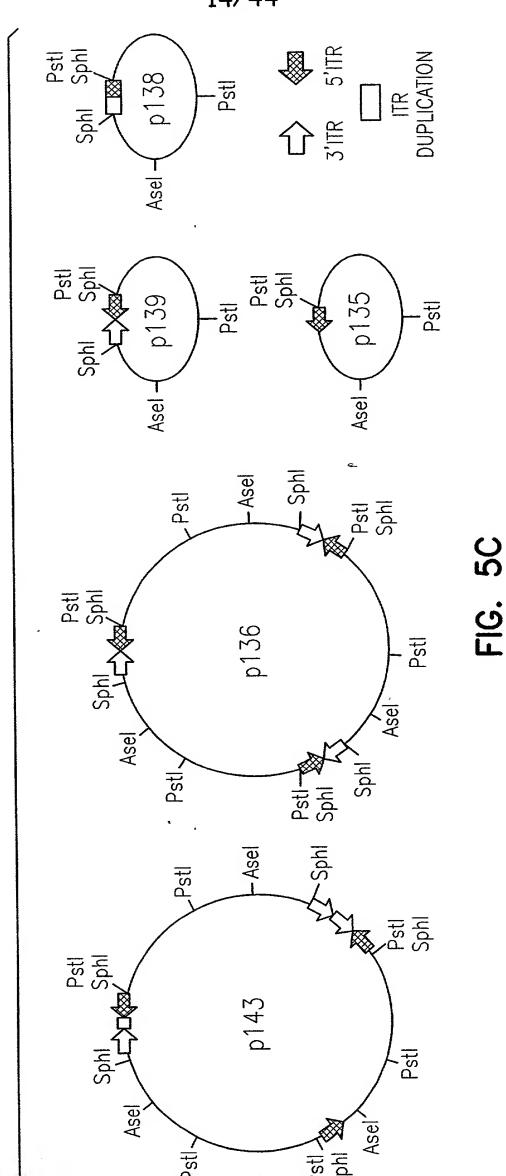


FIG. 5B

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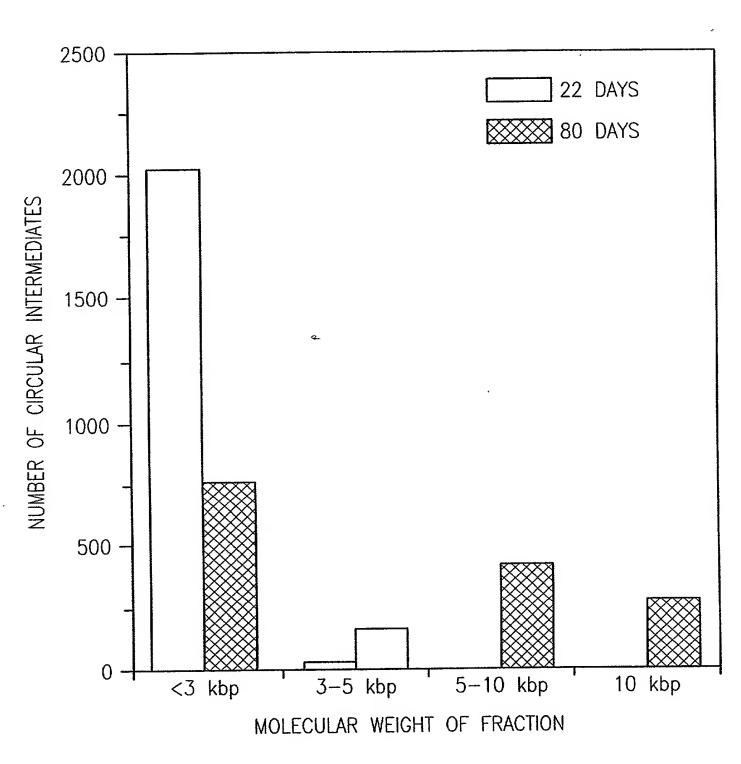


FIG. 6

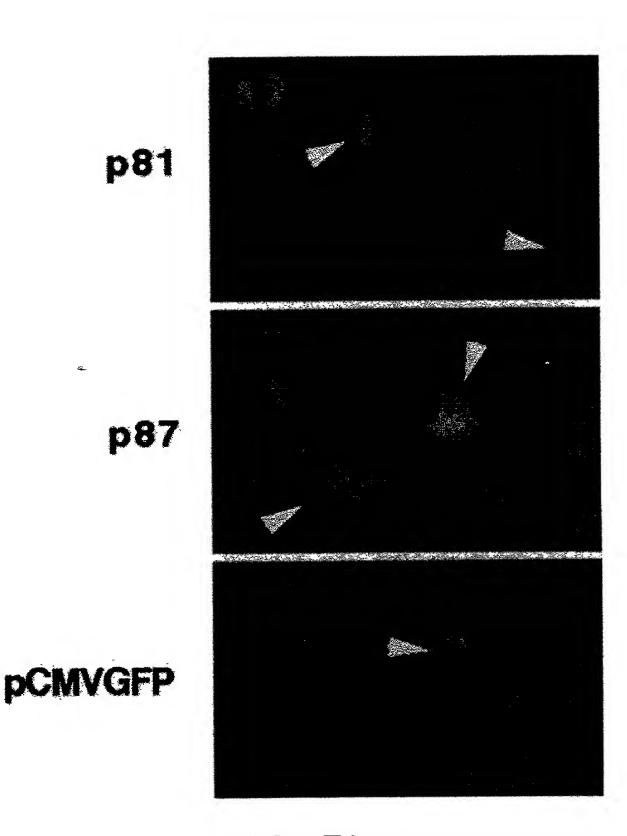


FIG. 7A

ADENO-ASSOCIATED VIRUS VLJIORS Ti._E: John F. Engelhardt et al. INVENTORS NAME:

SERIAL NO.: 09/276,625

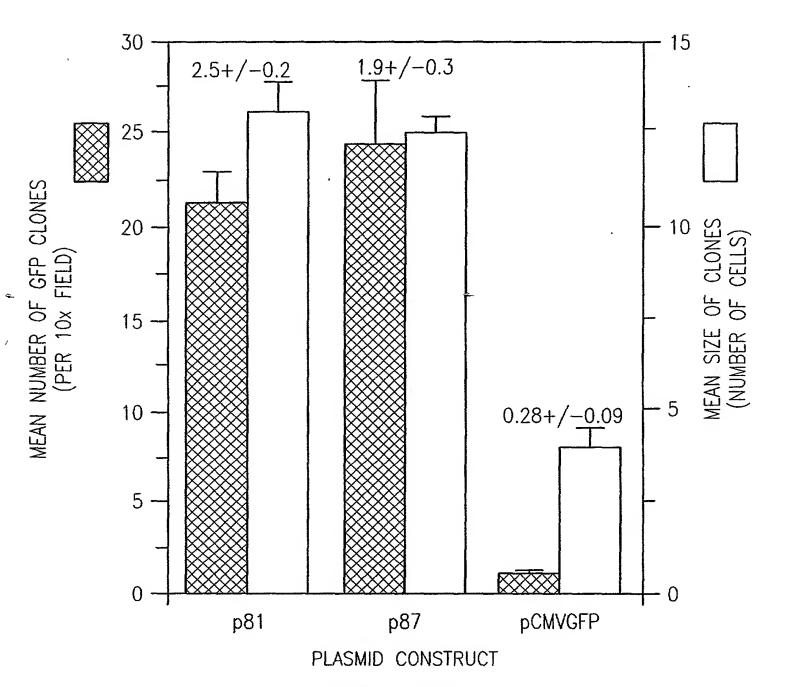


FIG. 7B

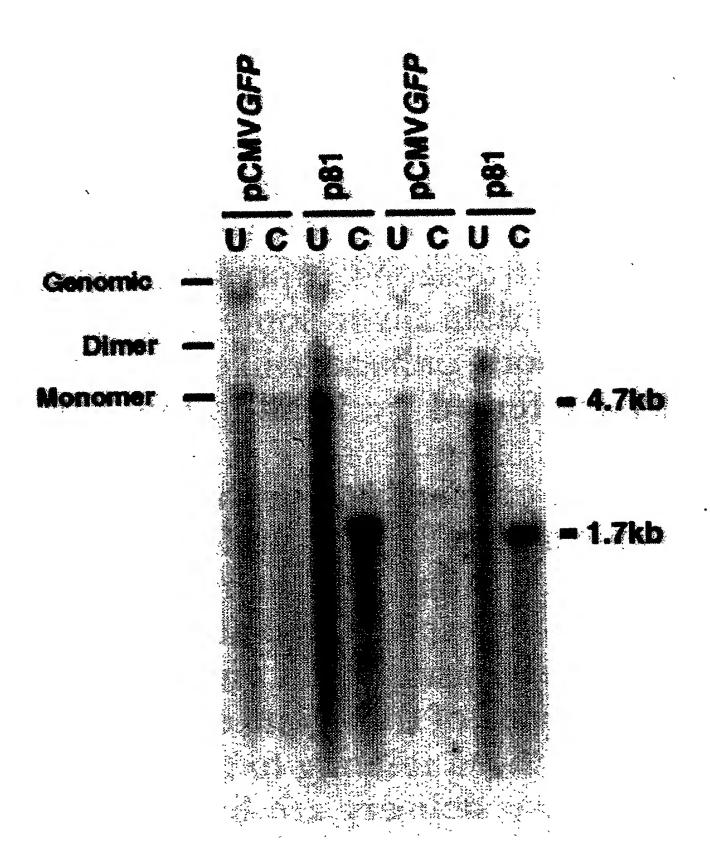


FIG. 7C

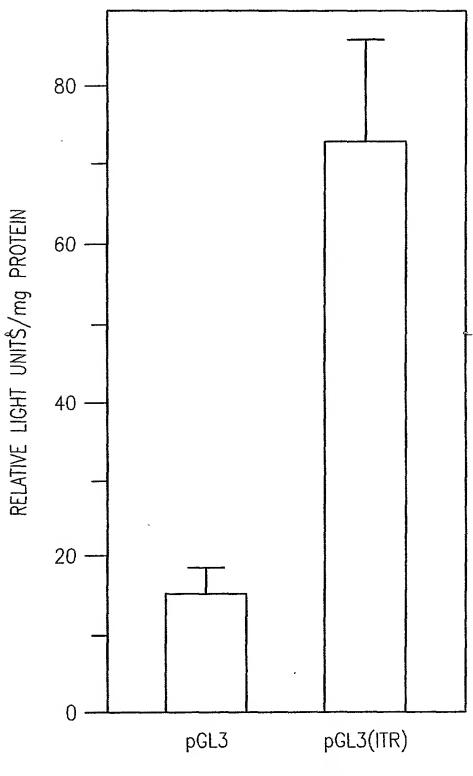
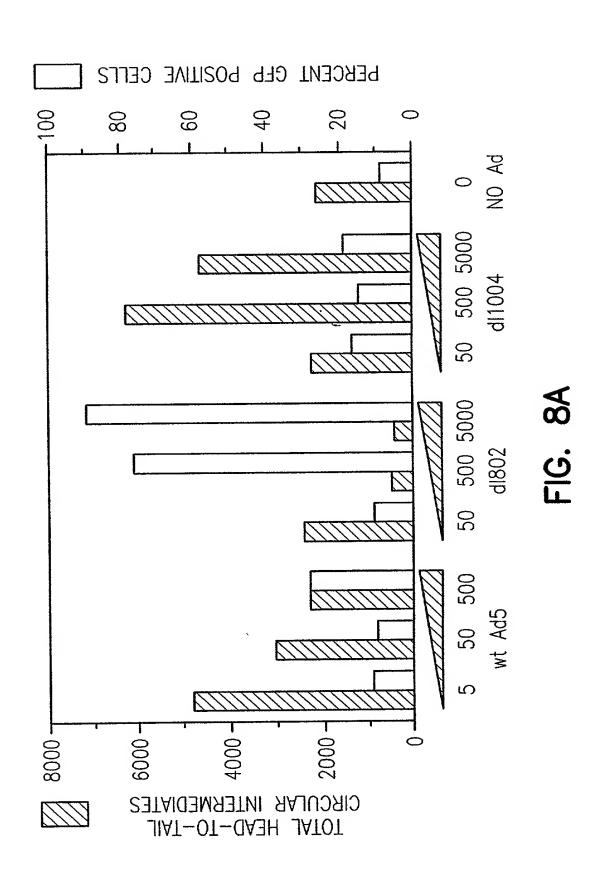


FIG. 7D

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TITLE: ADENO-ASSOCIATED VIRUS VECTORS INVENTORS NAME: John F. Engelhardt et al.

SERIAL NO.: 09/276,625

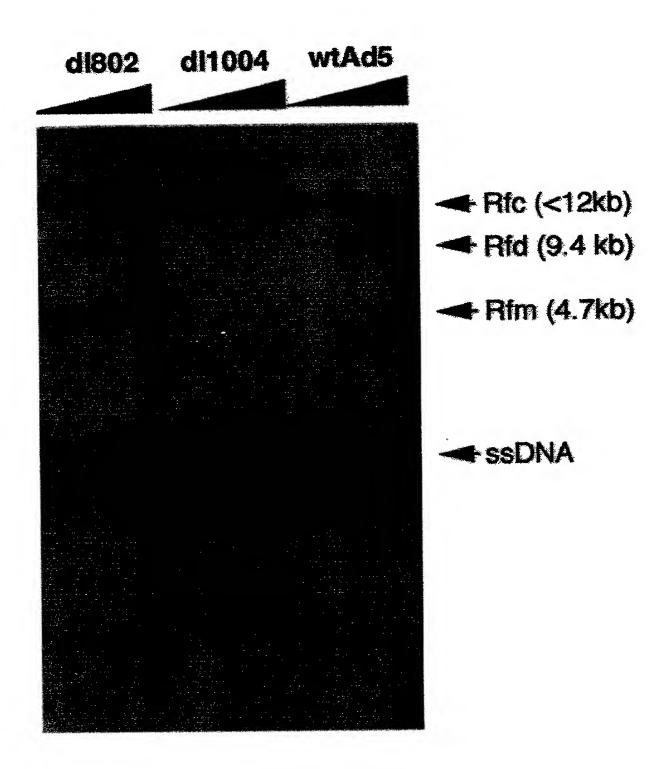


FIG. 8B

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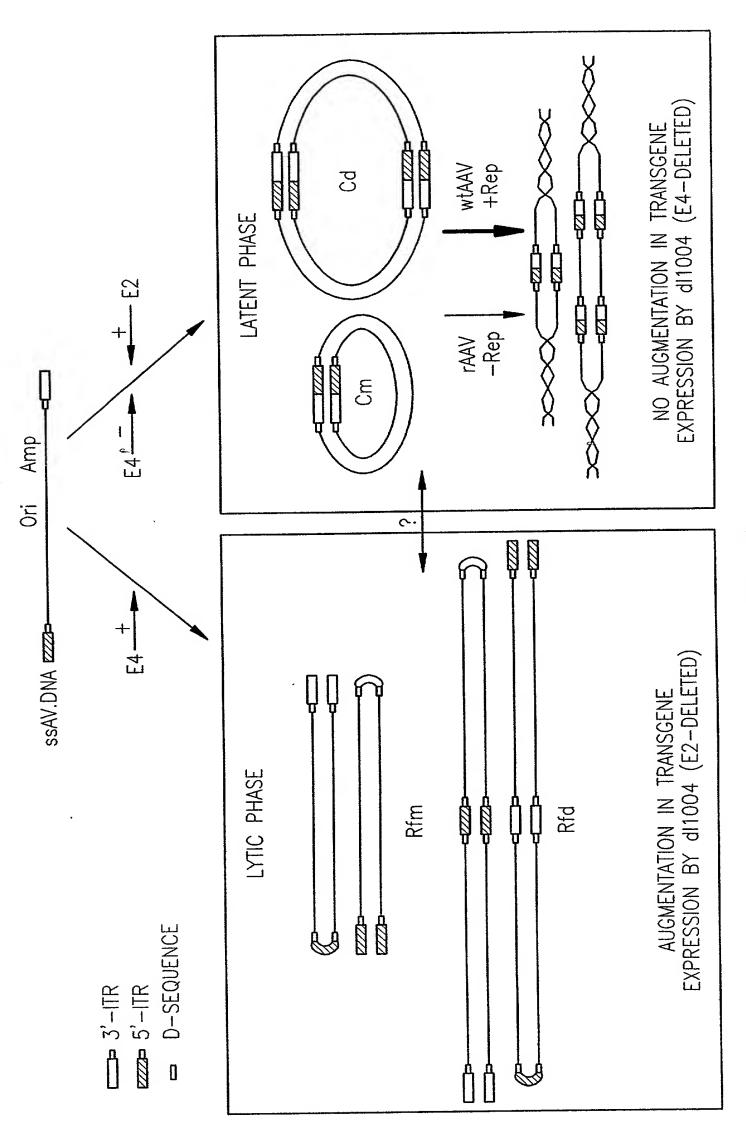


FIG. 9

TILE: ADENO-ASSOCIATED VIRUS VEL. DRS INVENTORS NAME: John F. Engelhardt et al.

SERIAL NO.: 09/276,625

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10	20	30	40	50	60
GCATGCAAGC	TGTAGATAAG	TAGCATGGCG	GGTTAATCAT	TAACTACAAG	GAACCCCTAG
CGTACGTTCG	ACATCTATTC	ATCGTACCGC	CCAATTAGTA	ATTGATGTTC	CTTGGGGATC
70	80	90	100	110	120
TGATGGAGTT	GGCCACTCCC	TCTCTGCGCG	CTCGCTCGCT	CACTGAGGCC	GGGCGGCCAA
ACTACCTCAA	CCGGTGAGGG	AGAGACGCGC	GAGCGAGCGA	GTGACTCCGG	CCCGCCGGTT
130	140	150	160	170	180
AGGTCGCCCG	ACGCCCGGGC	TTTGCCCGGG	CGGCCTCAGT	GAGCGAGCGA	GCGCGCAGAG
TCCAGCGGGC	TGCGGGCCCG	AAACGGGCCC	GCCGGAGTCA	CTCGCTCGCT	CGCGCGTCTC
190	200	210	220	230	240
AGGGAGTGGC	CAACTCCATC	ACTAGGGGTT	CCTTGTAGTT	AATGATTAAC	CCGCCATGCT
TCCCTCACCG	GTTGAGGTAG	TGATCCCCAA	GGAACATCAA	TTACTAATTG	GGCGGTACGA
250	260	270	280		
ACTTATCTAC	CGATGAATTC	GAGCTTGCAT	<u>GC</u>		
TGAATAGATG	GCTACTTAAG	CTCGAACGTA	C G		

FIG. 10A

60	50	40	30	20	10
				TGTAGATAAG	
CTTGGGGATC	ATTGATGTTC	CCAATTAGTA	ATCGTACCGC	ACATCTATTC	CGTACGTTCG
120	110	100	90	80	70
GGGCGCGCGC	CACTGAGGCC	CTCGCTCGCT	TCTCTGCGCG	GGCCACTCCC	TGATGGAGTT
CCCGCGCGCG	GTGACTCCGG	GAGCGAGCGA	AGAGACGCGC	CCGGTGAGGG	ACTACCTCAA
180	170	160	150	140	130
TGCCCGGGCG	GCCCGGGCTT	GGTCGCCCGA	GGCGACCAAA	ACTGAGGCCG	TOGOTOGOTO
ACGGGCCCGC	CCCCCAA	CCAGCGGGCT	CCGCTGGTTT	TGACTCCGGC	AGCGAGCGAG
	_			200	
				GCGAGCGCGC	•
ATCCCCAAGG	TGAGGTAGTG	CCTCACCGGT	CGCGTCTCTC	CGCTCGCGCG	CGGAGTCACT
_				_	
				260	
•				TGATTAACCC	
CGAACGTACG	TACTTAAGCT	AATAGATGGC	CGGTACGATG	ACTAATTGGG	AACATCAATT

FIG. 10B

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10	20	30	40	50	60
GCATGCAAGC	TGTAGATAAG	TAGCATGGCG	GGTTAATCAT	TAACTACAAG	GAACCCCTAG
CGTACGTTCG	ACATCTATTC	ATCGTACCGC	CCAATTAGTA	ATTGATGTTC	CTTGGGGATC
70	80	90	100	110	120
TGATGGAGTT	GGCCACTCCC	TCTCTGCGCG	CTCGCTCGCT	CACTGAGGCC	GGGCGACCAA
ACTACCTCAA	CCGGTGAGGG	AGAGACGCGC	GAGCGAGCGA	GTGACTCCGG	CCCGCTGGTT
130	. 140	150	160	170	180
AGGTCGCCCG	ACGCCCGGGC	TTTGGTCGCC	CGGCCTCAGT	GAGCGAGCGA	GCGCGCAGAG
TCCAGCGGGC	TGCGGGCCCG	AAACCAGCGG	GCCGGAGTCA	CICGCICGCI	CGCGCGTCTC
				•	
190	200	210	220	230	240
				AATGATTAAC	
TCCCTCACCG	GTTGAGGTAG	TGATCCCCAA	GGAACATCAA	TTACTAATTG	GGCGGTACGA
					•
250	. 260	270	280		
ACTTATCTAC	CGATGAATTC	GAGCTTGCAT	GC		
TGAATAGATG	GCTACTTAAG	CTCGAACGTA	<u>CG</u>	·	\$ _

FIG. 10C

		10	20	30	40	50	
P81	1	GCATGCAAGC	TGTAGATAAG	TAGCATGGCG	GGTTAATCAT	TAACTACAAG	50
p79	1	GCATGCAAGC	TGTAGATAAG	TAGCATGGCG	GGTTAATCAT	TAACTACAAG	50
p1202	1	GCATGCAAGC	TGTAGATAAG	TAGCATGGCG	GGTTAATCAT	TAACTACAAG	50
•							
		60	70	80	90	100	•
P81	51	GAACCCCTAG	TGATGGAGTT	GCCACICCC	TCTCTGCGCG	CTCGCTCGCT	100
p79	51	GAACCCCTAG	TGATGGAGTT	GGCCACTCCC	TCTCTGCGCG	CTCGCTCGCT	100
p1202	51	GAACCCCTAG	TGATGGAGTT	GCCACTCCC	TCTCTGCGCG	CTCGCTCGCT	100
_							
,		110	120	130	140	150	
P81		CACTGAGGCC					
p79		CACTGAGGCC					
p1202	101	CACTGAGGCC	GGGCG			ACCAAAG	150
	c .				e.		
		160	170	180	190	200	
P81		GTCGCCCGAC					
p79		GgtcgCCcga					
p1202	151	GTCGCCCGAC	GCCCGGGCTT	TGGtCGCCCG	GCCTCAGTGA	GCGAGCGAGC	200
		210	o n o	220	240	250	
	001	210	220	230			250
P81		GCGCAGAGAG GCGCAGAGAG					
p79		GCGCAGAGAG					
.p1202	201	GCGCAGAGAG	GGAGIGGCCA	ACTUATURE	INGGGGIICC	TIGINGIAN	230
		260	270	. 280	290	300	
P81	251	TGATTAACCC	- •				300
p79		TGATTAACCC					
p1202		TGATTAACCC					
Franc	~ ~ L	·	annervatio				

FIG. 11

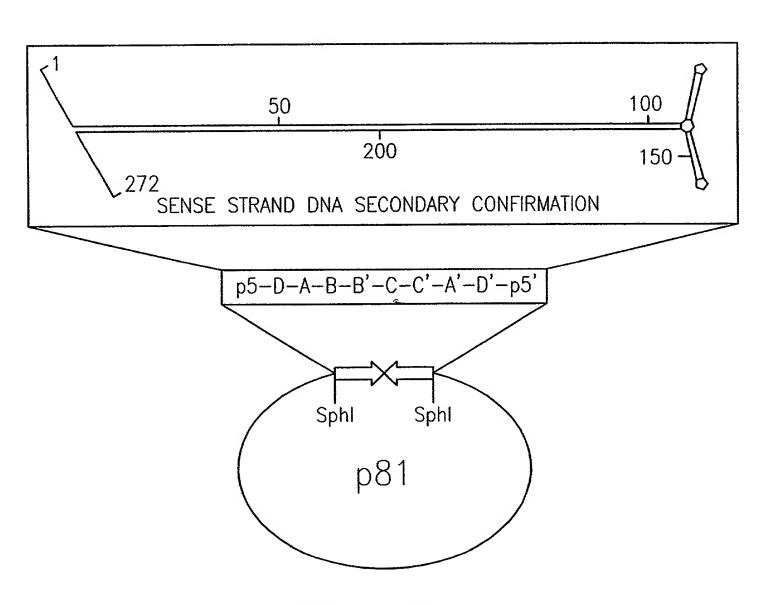
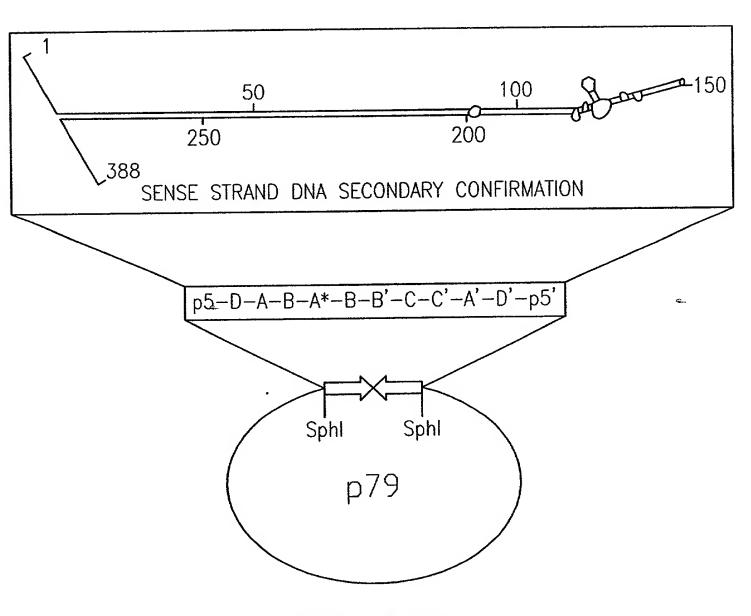


FIG. 12A

Ti._E: ADENO-ASSOCIATED VIRUS VLoiORS INVENTORS NAME: John F. Engelhardt et al. SERIAL NO.: 09/276,625

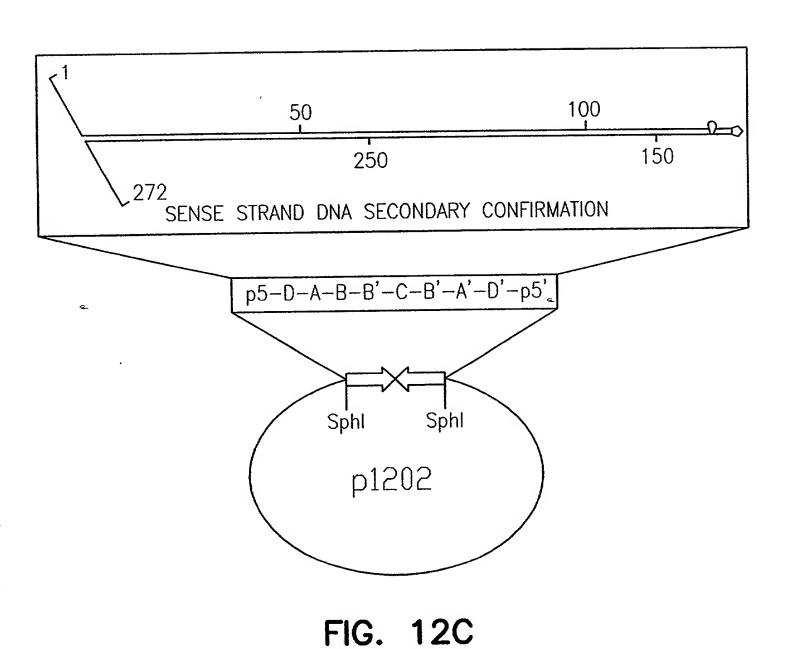
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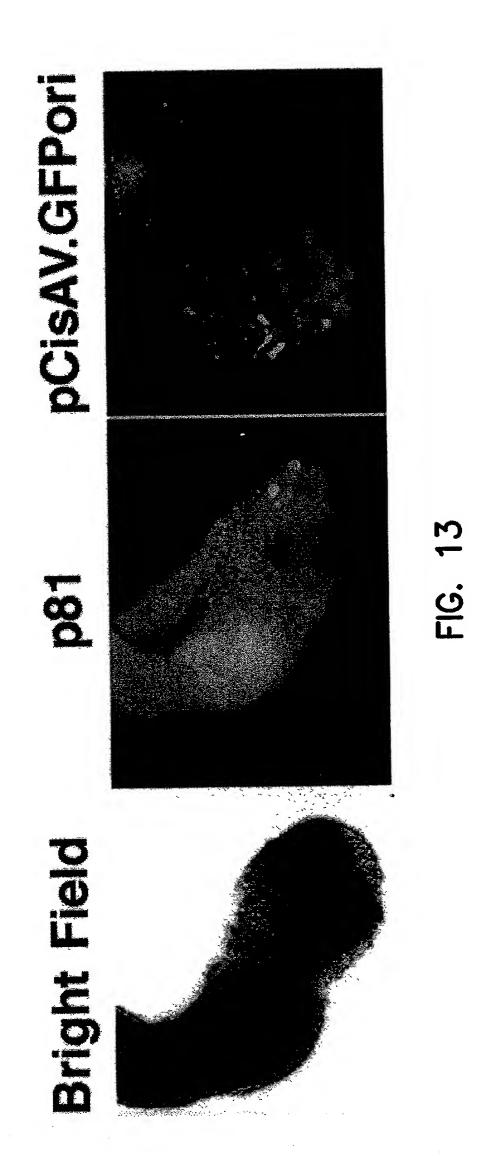
FIG. 12B

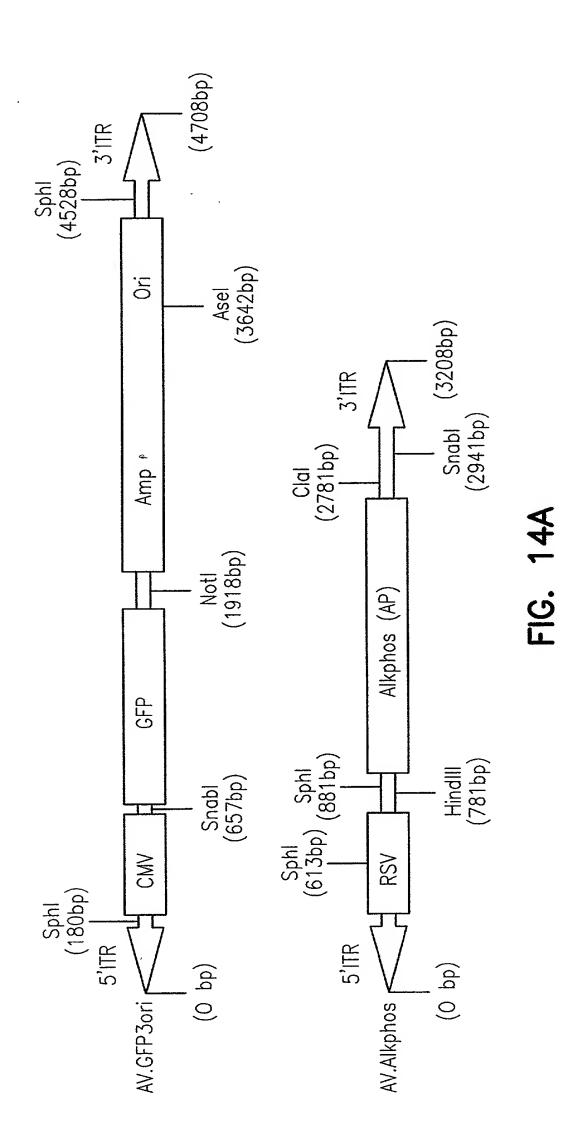
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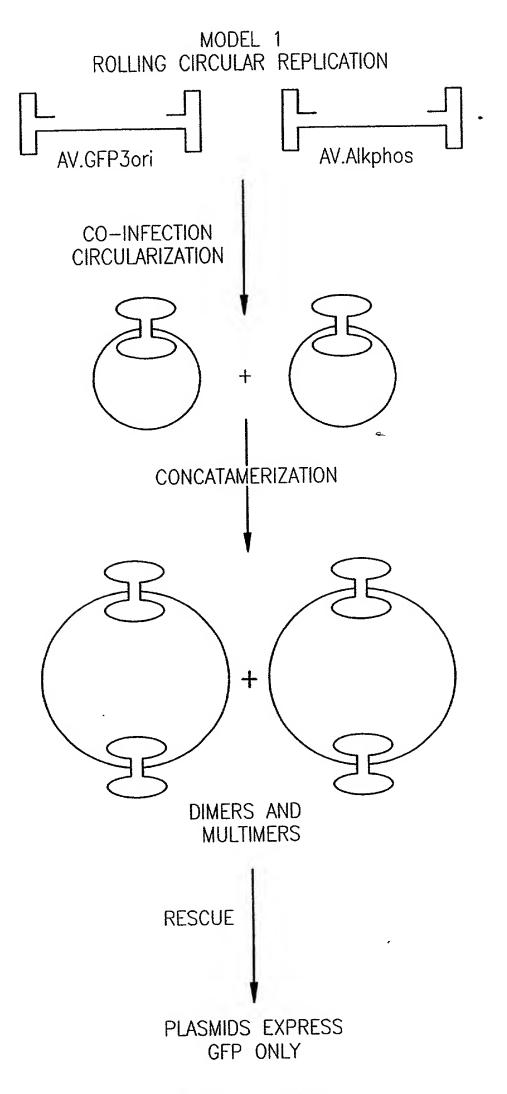


FIG. 14B

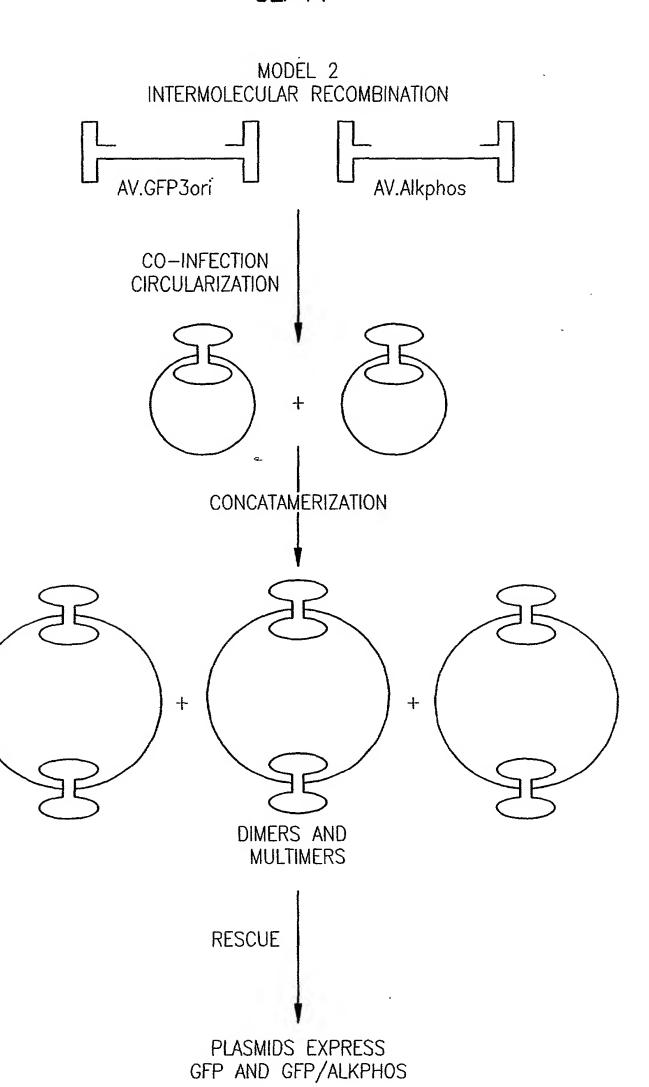


FIG. 14C

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TITLE: ADENO-ASSOCIATED VIRUS VECTORS INVENTORS NAME: John F. Engelhardt et al. SERIAL NO.: 09/276,625

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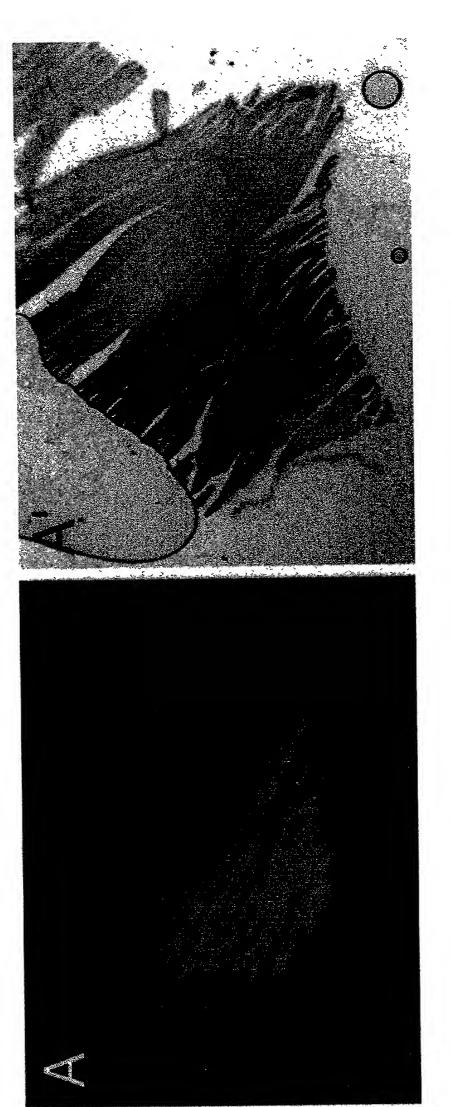


FIG. 15A

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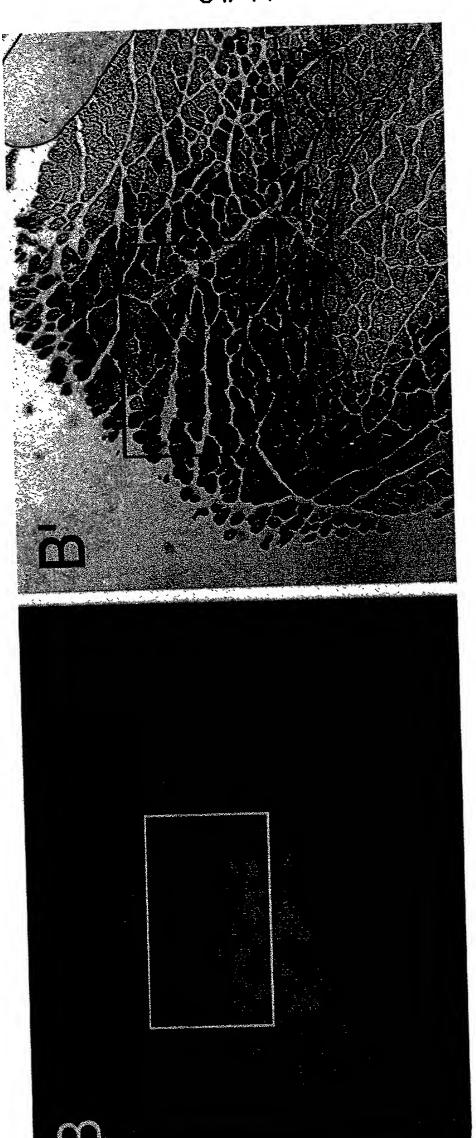


FIG. 15B

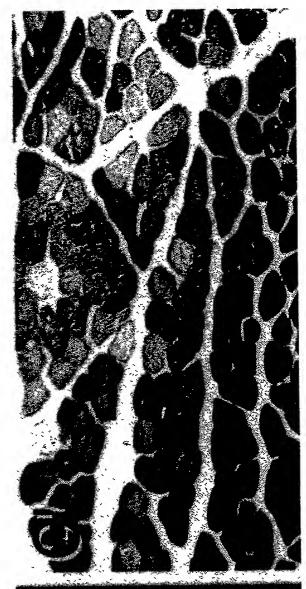
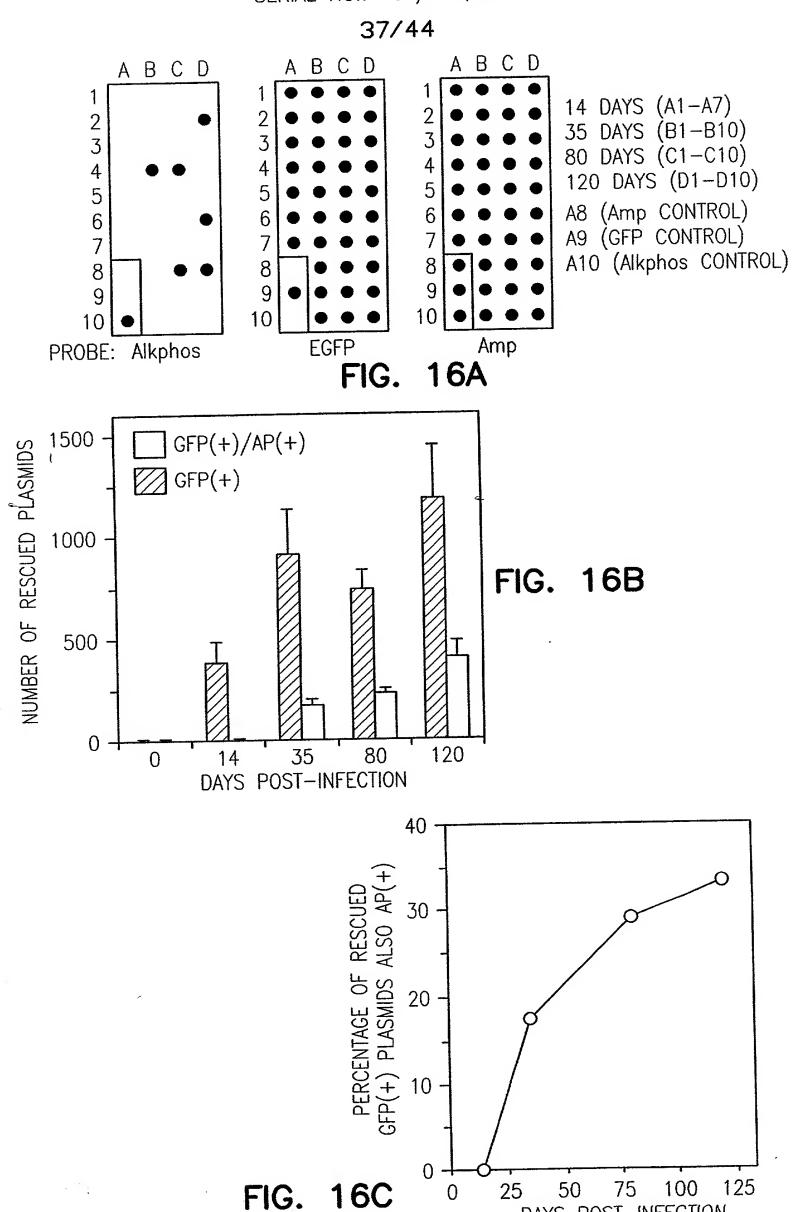




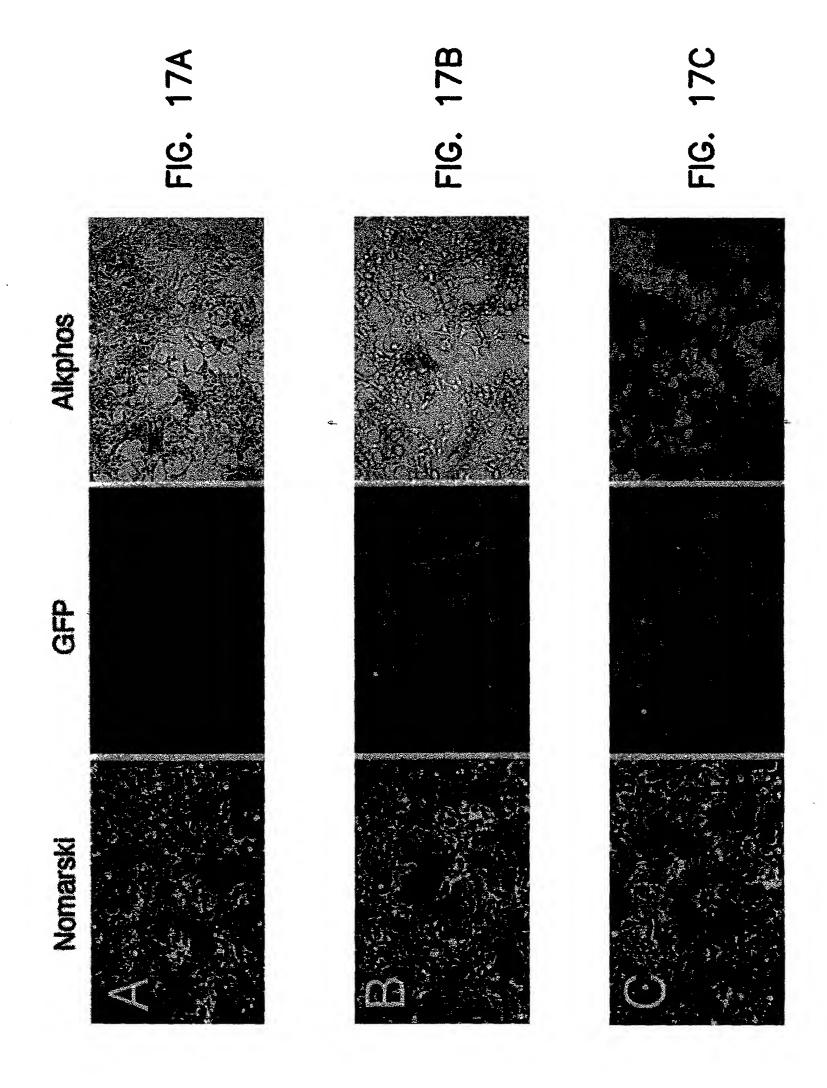


FIG. 15D



DAYS POST-INFECTION

TITLE: ADENO-ASSES INVENTORS NAME: John F. Engense SERIAL NO.: 09/276,625 ADENO-ASSOCIATED VIRUS VECTORS RS NAME: John F. Engelhardt et al.



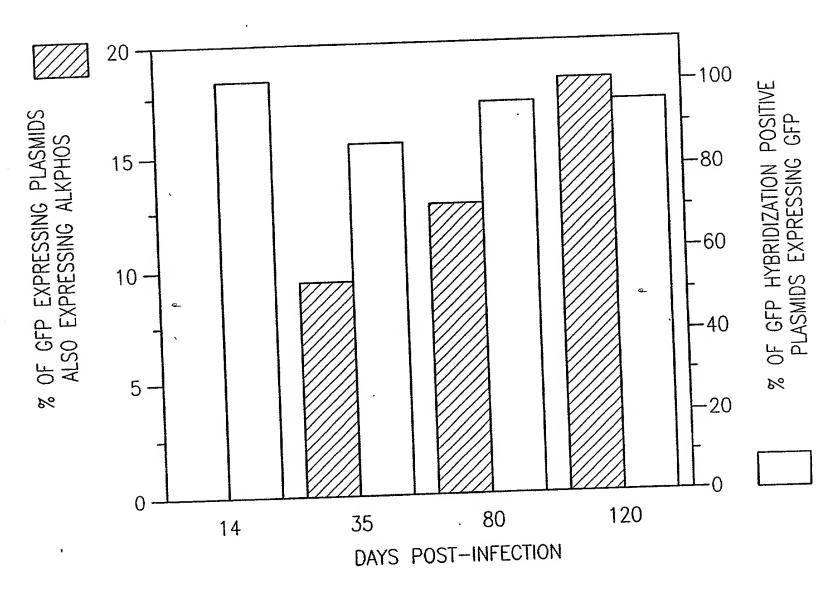


FIG. 17D

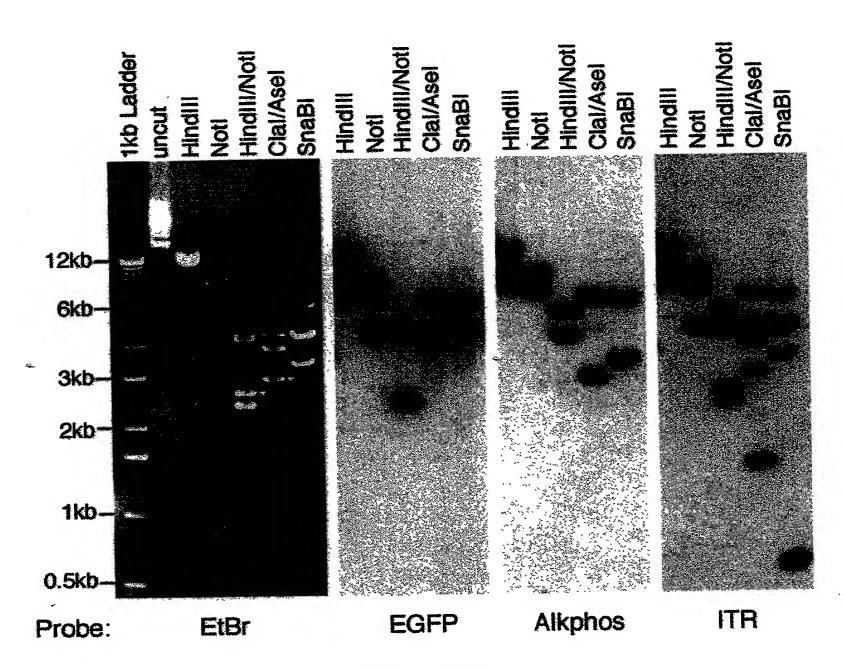
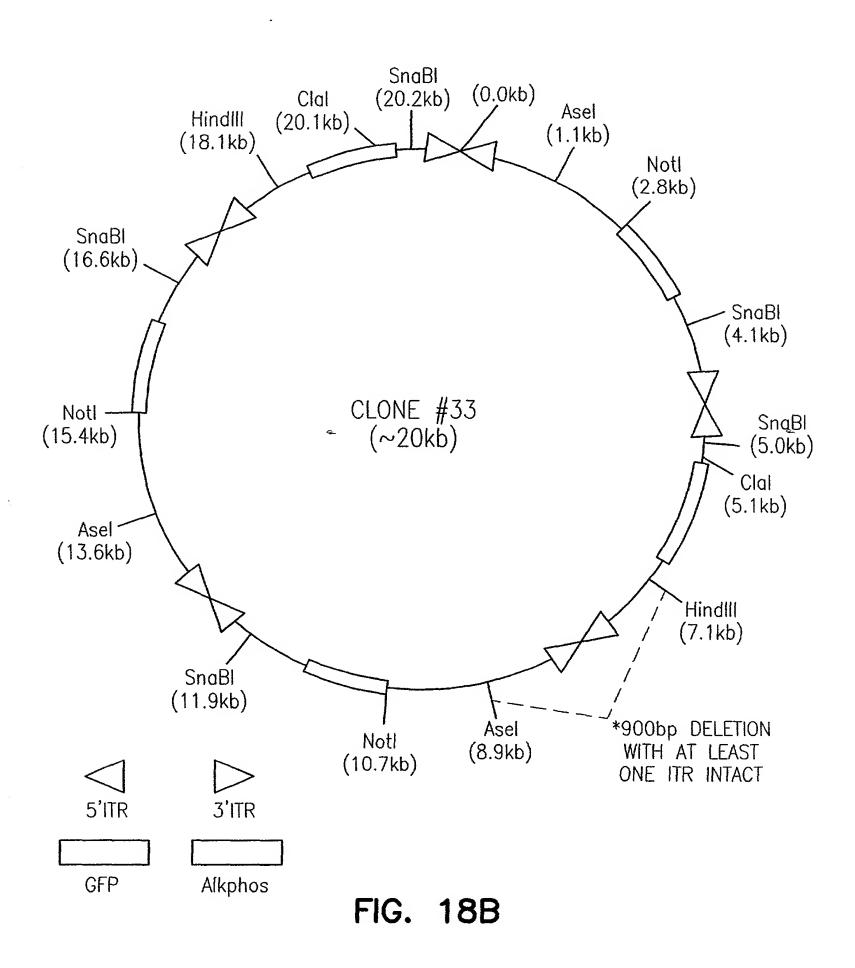


FIG. 18A



TITLE: ADENO-ASSOCIATED VIRUS VECTORS INVENTORS NAME: John F. Engelhardt et al.

SERIAL NO.: 09/276,625

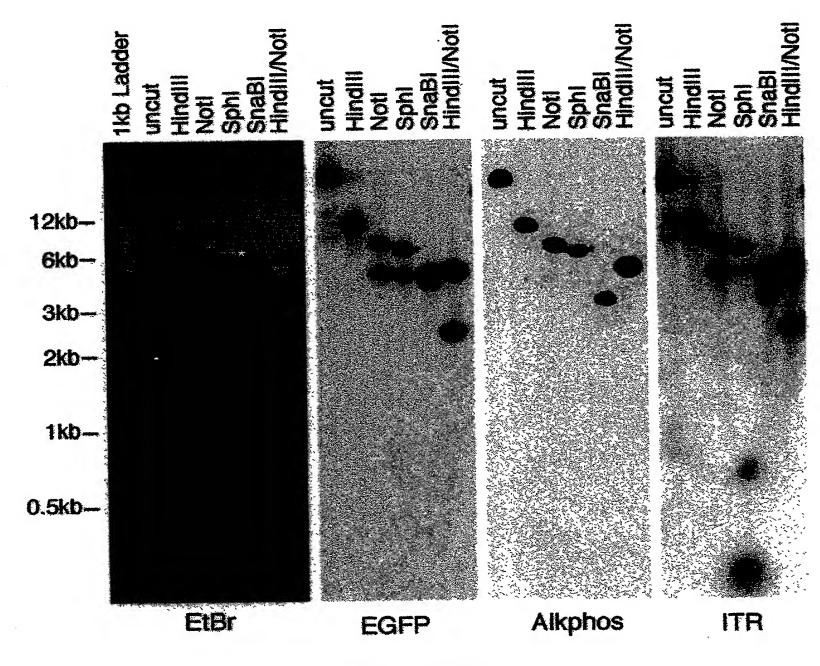


FIG. 18C

INVENTORS NAME: John F. Engelhardt et al. SERIAL NO.: 09/276,625

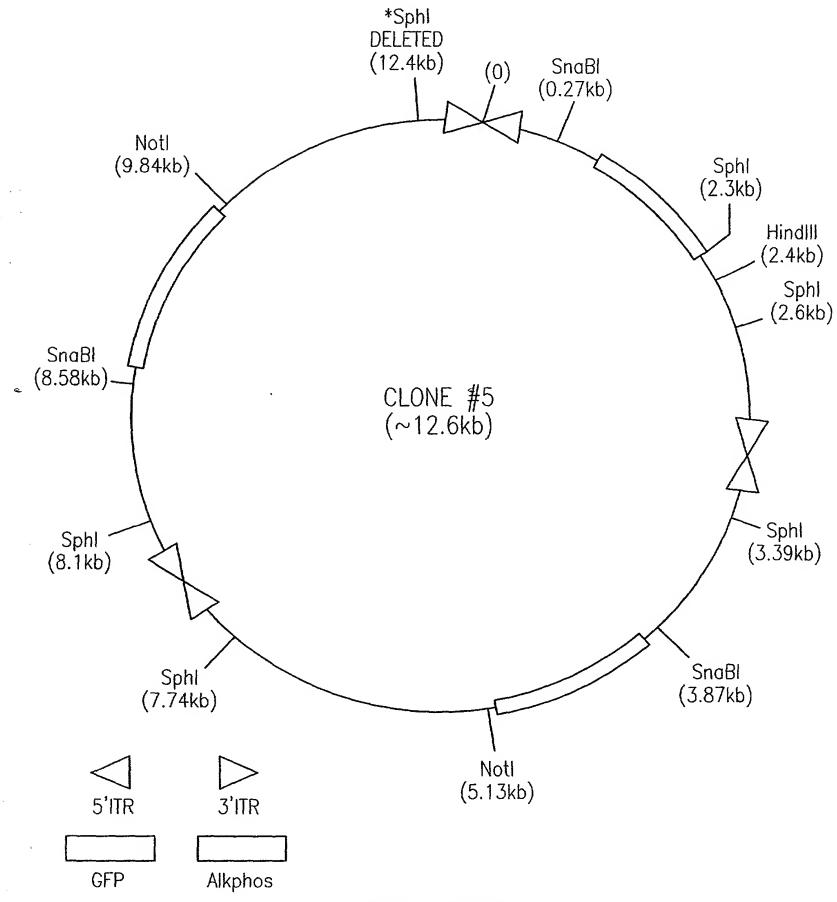


FIG. 18D

